

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Top Quality Industrial Finishers, LLC

Delaware Manufacturing Extension Partnership

Top Quality Industrial Finishers, LLC Improves Efficiency with 5S

Client Profile:

Top Quality Industrial Finishers, LLC, founded in 1998, provides industrial powder coating and spray painting for small machine shops, in addition to handling custom colors for the metal grids that hold Armstrong ceiling tiles installed at Starbucks and other commercial operations. In addition, Top Quality has landed contracts providing finishes for the defense industry, including the control keyboards installed in tanks, working as subcontractors for two Class-A machine shops for the Boeing Co., Olympic Tool and Machine Corp. and Folsom Tool and Mold Corp. The company employs 7 people at its facility in Wilmington, Delaware.

Situation:

Operations at Top Quality were not as smooth as the company's power-coated finishes. There were glitches in the masking area, where workers cover screw holes, bushings and other parts that are not to be painted. It is an exacting, labor-intensive task, requiring more than 20 different sizes of adhesive-backed masking papers, tapes and buttons. Misplace a button and paint will obscure the threads in a hole, meaning screws and bolts will bind up. Improperly applied paper results in blurred edges where there should be clean, crisp lines. In addition, the process was taking longer than it should because workers frequently misplaced tools. In shipping, packing materials were brought in on carts. Workers wasted time looking through the cart for the supplies they needed to pack products and send them off to customers. Top Quality turned to the Delaware Manufacturing Extension Partnership (DEMEP), a NIST MEP network affiliate, for help in streamlining its operations.

Solution:

DEMEP's field agent, John Barone, initiated a 5S program, adapted from a Japanese method in which manufacturers Sort, Set in order, Shine, Standardize and Sustain in order to boost efficiency, profitability and safety. Sort refers to going through a work space and keeping only what is necessary to complete the job at hand. Set in Order means putting everything in its proper place and finding ways to make it easy for employees to return an item to its proper place. Shine translates to regular cleaning and maintenance. Standardize refers to making the new work habits part of the daily routine. Sustain means keep up the good work. Integrate the new systems and procedures into employee education and training.

Barone analyzed the layout of the work areas, meticulously mapping the flow of production in both the masking and packing-and-shipping departments. His mission was to find ways to eliminate steps, as in the time workers spent walking from place to place to retrieve tools and materials. "In masking, we looked at everything that people did that was not masking and made it go away," Barone said. "Rummaging around for tools is not masking. It's waste." The solution was to organize tools on pegboards, with shadow outlines designating where each tool should go, immediately alerting workers to a missing knife or scissors. Masking tapes and buttons are organized by size and stored on shelves. There is a built-in trigger that tells workers when materials are running low, a bold and simple

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line on the shelf with the word 'reorder.' Employees are authorized to fill out forms to order fresh supplies. "That eliminated the problem of people grabbing the last one and not realizing they are out of it," Barone said. Tool boards also were installed in the shipping department. Packing materials are organized and close at hand, stored on strategically placed racks and hanging on the walls. "When you need something, you just reach out and grab it," Barone said. DEMEP identified delivery sites for skids that don't impede the flow of packing. As a result of DEMEP's assistance, the company's work force has internalized the new procedures, making for a more streamlined, orderly operation.

Results:

- * Improved efficiency by 15 percent.
- * Reduced labor costs by 5 percent.
- * Reduced masking time by 10 percent.
- * Reduced set-up time by 8-10 percent.

Testimonial:

"DEMEP helped us to increase our profits and decrease our stress."

Kevin Walto, Director of Operations